COYOTE STOCKPILE PROJECT
SUMMER CAMPAIGN

ENVIRONMENTAL ASSESSMENT

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BLM
NEVADA Elko District – Tuscarora Field Office

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1.0 INTRODUCTION

The Coyote Stockpile Project Summer Campaign (Project) is located in Elko County approximately 25 miles north to northwest of Carlin, Nevada and approximately 52 miles northwest of Elko, Nevada in the Tuscarora Mountains as illustrated in Figure 1. Progressive Contracting Inc. (PCI) submitted a plan of operations to the Bureau of Land Management (BLM) Tuscarora Field Office in January 2014. The Project Area consists of the existing open pit area for the Coyote Mine site, also known as the Patsy Ann Mine, and the existing haul road that accesses this mine site from the Maggie Creek Road. From the intersection with the Maggie Creek Road, the ore would be hauled down the Maggie Creek Road to the jig plant located on private land for processing. The Coyote Mine has been in existence since the late 1970's and was mined until the early 1980's. PCI proposes to remove approximately 60,000 tons of barite from the Coyote Mine and conduct limited road maintenance on the existing access road. The Coyote Mine site is located on the ridge between the Little Jack and Coyote Creek drainages at an elevation of approximately 7,200 feet above mean sea level (amsl). The Project can be reached by accessing the existing haul road originating in the Little Jack Creek drainage and traversing approximately 4.4 miles north along the ridge to the mine site. The Project would occur over a 24 week period in the year 2015 between April and November weather permitting. The proposed surface disturbance at the pit is approximately four acres of public land. The Project would employ two to three individuals.

1.1 PURPOSE AND NEED

The BLM is responsible for managing mineral rights and access to mining claims on federal lands as authorized by the General Mining Law of 1872, as amended. Under the law, persons are entitled to reasonable access to explore for and develop mineral deposits on public domain lands that have not been withdrawn from mineral entry.

The BLM's purpose is to respond to PCI's proposed plan of operations. PCI is proposing to remove a shot bench of barite ore from the Coyote Mine. This bench of ore was shot (broken up by means of explosives) when the mine was in operation in the late 1970's to early 1980's. In responding to PCI's proposed Project, the BLM would determine whether to approve, approve with modifications, or deny the proposed Project.

The BLM's need for the action is based on PCI's proposed Project. The BLM is required to respond to PCI's proposed Project to conduct a mining operation for a locatable mineral in accordance with the Surface Management Regulations (43 CFR Subpart 3809), Use and Occupancy under the Mining Law Regulations (43 CFR Subpart 3715) and other applicable laws such as the Federal Land Policy and Management Act of 1976 (FLPMA) and the National Environmental Policy Act of 1969 (NEPA). In considering the need for the proposed Project, the BLM must determine if the proposed Project would create unnecessary or undue degradation to the public lands involved in the action. The NEPA mandates that the BLM evaluate or

analyze the impacts of the proposed Project and develop alternatives and mitigation, when necessary, to lessen any impacts to the resources and human environment.

PCI's purpose of the Proposed Action is to remove the existing shot bench of ore from the Coyote Mine and process this ore at their jig plant located on private land. The need for the Proposed Action arises from international, national, and regional market demands for barite.

1.2 RELATIONSHIP TO LAWS, POLICIES, AND LAND USE PLANS

The FLPMA requires that an action under consideration be in conformance with the applicable BLM land use plan, and be consistent with other federal, state, local, and tribal policies.

The State of Nevada's 1986 Statewide Policy Plan for Public Lands section on Mineral Resources (page 10) states the Goals for Mineral Resources –as: 1) recognize that the development of Nevada's mineral resources is desirable and necessary to the nation, the state, and particularly, to the rural counties of the state; 2) retain existing mining areas and promote the expansion of mining operations and areas, while respecting other resource values; and 3) develop policies and regulations that provide for the long-term availability and responsible development of Nevada's mineral resources.

The 2008 Elko County Public Lands Policy Plan for Mineral Resources (page 37) states: the development of Nevada's mineral resources is desirable and necessary to the economy of the nation, the state and particularly to Elko County.

1.2.1 Federal Land Use Plan Conformance

The Proposed Action and alternatives described below are in conformance with the Elko Resource Management Plan, Issue – Minerals, management prescription number one (BLM, 1987).

1.2.2 Federal Laws and Regulations

Project approval is required by the BLM pursuant to the FLPMA, as amended, the Use and Occupancy under the Mining Law Regulations (43 CFR Subpart 3715), and the Surface Management Regulations (43 CFR Subpart 3809). The BLM is required by the NEPA to review the impacts of the overall proposal, including impacts on both public and private lands. The BLM has determined that an environmental assessment (EA) must be prepared for this Project to fulfill the NEPA requirements.

The Use and Occupancy under the Mining Law Regulations (43 CFR Subpart 3715) identify the requirements for "use and occupancy of public lands for the development of locatable mineral deposits by restricting such use or occupancy to that which is reasonably incident." A Programmatic Environmental Assessment for mining claims, mill site use, and occupancy for selected actions was completed by the Nevada State Office of the BLM with a finding of no significant impact (BLM 2000). The Programmatic EA provides the basic analysis for the

proposed use or occupancy of public lands related to locatable minerals. This EA provides the site specific analysis.

This Proposed Action is in conformance with requirements of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation 36 CFR Subpart 800 regarding the effects of the proposed undertaking on historic and prehistoric properties and possible protection, mitigation or avoidance as required.

1.3 ISSUES

The following resources were identified as possibly having issues with the Proposed Action and are addressed in this EA:

- Lands (realty) or access;
- Lands with Wilderness Characteristics;
- Nonnative invasive weed species;
- Soils;
- Special status species, including threatened, endangered and candidate wildlife and plant species;
- Water quality (surface); and
- Wildlife, including special status species and migratory birds.

2.0 PROPOSED ACTION AND ALTERNATIVES

The following section describes PCI's Proposed Action and alternatives, including the No Action Alternative.

2.1 Project Area

The Coyote Stockpile Project Summer Campaign is located in Elko County approximately 25 miles north to northwest of Carlin, Nevada and approximately 52 miles northwest of Elko, Nevada as illustrated in Figure 1. The Project Area is defined as the existing open pit at the Coyote Mine site and the existing haul road that provides access to this mine site from the Maggie Creek Road, which is designated Elko county road (M-117). See Figure 2. The Project encompasses approximately four acres of public land at the Coyote Mine and one acre of disturbance created by road maintenance along the existing haul road. The Project Area is located in the Tuscarora Mountains in the vicinity of Beaver Peak.

The existing Coyote Mine, also known as the Patsy Ann Mine, was previously operated in the late 1970's to the early 1980's. The Coyote Mine is located on the ridge between Little Jack Creek and Coyote Creek drainages. The elevation is approximately 7,200 feet amsl at the Coyote Mine. The Coyote Mine mining operation consisted of an open pit mine and surface exploration. See Figure 3. The ore was hauled away from the mine for processing at an off-site location. With the January 1981 implementation of the 43 CFR Subpart 3809 Surface Management regulations, the Coyote Mine operated under a plan of operations from 1981 to

approximately 1985. The Coyote Mine is an old barite mine. The mine site consists of the open pit, waste rock dump and exploration roads, drill sites and trenches. An old haul road provides access to the mine site. The haul road runs parallel to the Little Jack Creek drainage. The elevation for the access road ranges from approximately 6,000 feet to 7,200 feet amsl. Besides the Coyote Mine, the area has been explored for both barite and gold and several reclaimed and unreclaimed exploration roads and drill sites exist in the area. Exploration has been conducted in the area from pre-1981 regulations to the present under Notice level operations.

2.2 Proposed Action

The Proposed Action includes removal of the shot bench of barite ore from the existing Coyote Mine and limited maintenance on the existing access road (old existing haul road). The ore would be hauled to an existing jig plant for processing. This permitted jig plant is located on private land at Newmont's Maggie Creek Complex. Approximately 60,000 tons of barite ore would be removed from the existing Coyote Mine. This bench of ore was shot (broken up by means of explosives or blasted) and left in place in the late 1970's to early 1980's. The Project would involve approximately four acres of surface disturbance on public land inside the existing open pit. The life of the Project would be approximately one year occurring during the spring to fall seasons (approximately up to 24 weeks) between April and November of 2015 weather permitting. The goal is to remove the ore, reclaim the site, and be done with the Project. Removal of the ore would take approximately 20 weeks with set-up and reclamation each taking one to two weeks. The Proposed Action would occur during daylight hours. The Project would employ two to three people. These people would implement the on the ground activities and conduct the entire operation.

Waste rock material would be left in the pit and used as rip-rap in the construction of the rolling dips and aprons; only ore would be hauled to the jig plant for processing. Ore would be loaded into the over-the-road haul trucks with a loader. Up to 3 trucks would be used to haul ore from the mine site to the jig plant. Ore would be hauled to the jig plant for processing with one to two round trips occurring per day. Distance from the mine site to the jig plant is a total of approximately fifteen miles. The existing haul road is approximately 11.2 miles long. From the intersection of the haul road and Maggie Creek road, which is a county road, to the jig plant is approximately 3.8 miles. A water truck will be used to water the roads for dust control.

The Project may require some limited maintenance and minor modification work on the old existing haul road, which provides access to the mine site. Approximately one acre of surface disturbance may be created as a result of road maintenance activities. Maintenance would consist of blading the road and creating a berm or adding material to the existing berm along the outside edge of the road with the sloughed material from the inside cut (cutbank or upslope side of the road); creating some rolling dips with associated energy dissipating rock aprons at key locations along the road in order to provide drainage to the road and prevent sediment from entering the downstream drainage; placing 2 foot diameter riprap aprons in the downhill side or outlet side of the drainage crossing or rolling dips to prevent erosion of the fill slope and road; and temporarily placing at the hairpin curve (tight curve or switchback) a long culvert to widen the curve in order to get the haul trucks around this curve. See Figure 4 for the location of the hairpin curve and the haul road that requires rolling dips to be installed at key locations. Upon

completion of the Project, PCI would remove the culvert from the hairpin curve and construct a rolling dip lined with riprap. An apron of riprap would be placed on the downhill side of the rolling dip in order to disperse and dissipate the energy from flowing water. This apron would also armor the channel to prevent erosion and collect sediment from the road. See Figure 5 for the typical design of the rolling dip and riprap apron. PCI would avoid disturbing the stable, vegetated berms on the downslope side of the old existing haul road since berms along the road are required by MSHA for safety. At the mine site (inside the existing pit) PCI would separate the ore from the waste rock material. Waste rock material would be utilized for the riprap rolling dips, aprons and to stabilize eroded places along the road.

PCI obtained the following permits in 2014: Department of the Army Permit (404 Permit) from the US Army Corps of Engineers (USACE), Temporary Permit for working waterways from the Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control, and a 401 Water Quality Certification from NDEP Bureau of Water Quality Planning. All permit requirements, as applicable, would be followed. PCI is responsible for acquiring permission from the private land owner, Elko Land and Livestock, to access and conduct road maintenance on the private land.

Because of the narrow one lane road with no place for vehicle passing, including no pull-offs, and for public safety, a temporary metal panel gate and sign would be placed at the beginning of the access road, which is where the existing haul road intersects with the Maggie Creek Road, and if necessary a gate would be placed at the pit to prevent vehicles from traveling the haul road during the Project operation. The gate(s) would be closed and locked when the trucks are hauling ore and during the Project. The trucks would run in a campaign, meaning they would travel together using radios for communications.

Upon completion of the Project the equipment would be removed from the site. Reclamation would consist of some minor regrading of waste rock material left in the open pit and possibly seeding the pit floor. Reclamation on the access road at the hairpin curve would consist of removing the culvert and constructing a rolling dip with the apron to armor the drainage channel on the downstream side as previously described in the Proposed Action. Stable, well vegetated berms on the downslope side of the existing haul road would remain intact and undisturbed. Reclamation would also include the removal of the temporary gate(s) and signs on the access road.

2.3 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. The shot bench of ore in the existing Coyote Mine or Patsy Ann Mine open pit would remain as is. No maintenance or work would be conducted on the road. No temporary gate and sign would be installed. No reclamation at the Coyote Mine would be conducted as a result of this Project.

3.0 AFFECTED ENVIRONMENT AND EFFECTS ANALYSIS

In preparation for this EA, potentially affected elements of the human environment and resources were reviewed by the BLM and identified as not present, present and not affected or negligibly affected, or present and affected. The following elements and resources are not present:

- Areas of critical environmental concern;
- Cultural resources (field survey completed June 2014 with negative results);
- Environmental justice;
- Farmland, prime and/or unique;
- Floodplains (as defined by the Federal Emergency Management Act);
- Forests and rangelands (HFRA);
- Native American Religious concerns;
- Paleontological Resources;
- Wild and scenic rivers;
- Wilderness; and
- Wild horses and burros.

The BLM specialists further determined that the following resources, although present in the Project Area, are not affected or negligibly affected by the Proposed Action or alternative:

- Air Quality: Generally, air quality in the Project Area is good. The Project Area is located in an unclassified area, and thus is considered to be in attainment for all criteria air pollutants. The average annual air temperature is approximately 43 degrees Fahrenheit.
  Emissions from the two haul trucks, loader, and water tender are minimal and are not expected to appreciably affect air quality due to the short duration (24 weeks) of the Project and the small scale operation. The haul truck operators would be the same as the loader and water tender operator. The operation would only occur during daylight hours. The roads would be watered to minimize dust.

- Climate Change: Climatic conditions in the Project Area are generally arid, but vary due to the topographic changes. The mean annual precipitation in the vicinity of the Project Area is estimated to range from 11 to 15 inches, most of which occurs as snow in the winter and as rain in May and June. The Project is not expected to have any appreciable impact on climate change due to the short duration (24 weeks) of the Project and the small scale operation.

- Lands (Realty): The legal description for the Coyote Mine is Mount Diablo Base and Meridian (MDBM), Township 36 North, Range 51 East, section 7. The existing haul road is located in Township 36 North, Range 51 East, sections 7, 8, 16, 17, 21, 28, 33, and 34, and Township 35 North, Range 51 East, sections 3, 10, 11, 13, and 14. No pending or authorized right-of-way actions exist in the vicinity of the Project Area. The ore would be removed from the active mining claims staked for locatable minerals at the Coyote Mine site. See Figure 6.

Access to the Project Area is via the Maggie Creek Road (M-117), which is an Elko County road, north of Carlin, Nevada in Elko County. From Newmont's Maggie Creek Complex, where the jig plant is located, drive approximately four miles up the Maggie Creek road to the turnoff to Little Jack Creek. Proceed up Little Jack Creek road to the Coyote Mine. From Maggie Creek road to the Coyote Mine is approximately eleven miles. Trucks would haul the ore a total of fifteen miles from the mine to the jig plant for processing. The Maggie Creek road is a graveled dirt road that crosses both private and public land. The Little Jack road is a dirt road that crosses private land owned and controlled by Elko Land and Livestock for approximately the first six miles. Once this dirt road crosses Little Jack Creek and makes the climb up into the Tuscarora Mountains the road is located on public lands for approximately five miles. The existing haul road would be minimally affected by the limited maintenance that would occur on the road during the life of the Project. The Maggie Creek Road would encounter negligible impacts from the Project due to the short duration of the Project.

- Lands with Wilderness Characteristics: The area of the Proposed Action was inventoried for wilderness characteristics during the 1978 Wilderness Characteristic Inventory. The inventory unique identifier was NV-010-210 (Checkerboard). In 1978, the area was not found to be of suitable size and did not meet the wilderness characteristic criteria. July 25, 2014, a wilderness characteristic inventory was completed in the vicinity of the proposed Project. The areas unique identifier is NV-EK-02-271 (Little Jack Creek) and consists of approximately 6,113 acres. The area was found to meet the wilderness characteristics criteria of having sufficient size, naturalness, and outstanding opportunities for solitude or a primitive and unconfined type of recreation. Since the access road would be blocked during the time the Project is in operation, the public would not be entering the area. Other parts, western and northern portions, of the 6,113 acres would be accessible by the public to utilize during the operation of the Project. The Project occurs in the eastern portion of the designated Little Jack Creek wilderness characteristic inventory area. The Project occupies approximately 5 acres of the 6,113 acres of the inventory area, which is less than 1 percent of the inventory area.

- Livestock grazing: The grazing permittee is Elko Land and Livestock. The Project Area is located within the T Lazy S Allotment. Since no new surface disturbance is proposed and the Project would occur on existing disturbance in the existing open pit and utilize the existing haul road, there would be no change to the animal unit months (AUMs) or grazing preference.

- Recreation: There are no established recreation trails, campsites, or parks in the vicinity of the Project Area. Recreational use would only be restricted for a short-term, which is approximately 24 weeks. During the day the access road would be restricted to travel when the haul trucks are running due to safety concerns as there are no passing areas along the length of the road. Recreational use in the vicinity of the Project Area is moderate and dispersed and consists mostly of hunting.

- Socio-economics: The Project would only employ two or three people for approximately 24 weeks. Therefore, the Project would have no noticeable effects to the socio-economics of the area because of its small size and short duration.

- Riparian and Wetlands: No riparian or wetland areas would be affected by the Proposed Action as none exist within the Project Area. Although riparian vegetation, including several species of willow, quaking aspen and several species of grasses and forbs, occurs along Little Jack Creek downstream from the proposed crossing site, effects from sediment would be negligible since activities are expected to occur when channel conditions are dry.

- Vegetation: Vegetation in the vicinity of the Project Area consists of a sagebrush-grassland community. The potential plant community in the vicinity of the Project Area consists of big sagebrush, antelope bitterbrush, bluebunch wheatgrass, slender wheatgrass, Thurber needlegrass, snowberry, Idaho fescue, and basin wildrye. Present vegetation in the vicinity of the Project Area consists of big sagebrush, Douglas rabbitbrush, bluebunch wheatgrass, Sandberg's bluegrass, slender wheatgrass, lupine, bottlebrush squirreltail, basin wildrye, and cheatgrass. Some pockets of low sagebrush exist. Vegetation production is limited due to low available water capacity and moisture loss due to rapid runoff. The main vegetation limitations are slope steepness and cold temperatures in the spring.

  No vegetation would be removed during the ore removal operation as no vegetation exists within the existing open pit. Minimal amounts of vegetation may be removed where road maintenance occurs and during the installation of riprap aprons in the drainage at the hairpin curve and rolling dips.

- Wastes (hazardous/solid): No chemicals subject to SARA Title III in amounts greater than 10,000 pounds would be used. No hazardous substances as defined by 40 CFR 355 above threshold planning quantities would be used. Trash or garbage would be hauled off-site and disposed of appropriately. No hazardous materials would be stored on site.

- Water (ground): The Proposed Action does not include dewatering; therefore, the groundwater would not be affected by the Proposed Action.

Elements of the human environment and resources found to be present and potentially affected are considered in this EA and discussed in the following sections.

Past, Present, and Reasonably Foreseeable Future Actions

The primary activities that would contribute to cumulative effects include past, present, proposed, and reasonably foreseeable future actions in mining, exploration, grazing, fire, fire rehabilitation, roads, power lines (rights-of-way actions), and recreation. Past, present, proposed, and reasonably foreseeable future actions are described in this section with respect to the cumulative assessment areas. A one year reasonably foreseeable time frame was used in this

analysis. The Proposed Action would result in approximately 5 acres of additional re-disturbed ground.

Past, present, and reasonably foreseeable future actions (PPRFFAs) are outlined below and are considered in addition to effects of the Proposed Action when analyzing cumulative effects. Cumulative effects, timeframe, and the cumulative effects study area (CESA) can vary by resource.

- Livestock Grazing: Livestock grazing has historically occurred in the Project Area and presently occurs; it is reasonably foreseeable for livestock grazing to continue in the Project Area and adjacent lands.

- Recreation: Recreation activities including hunting and other dispersed use have historically occurred in the Project Area and presently occurs; it is reasonably foreseeable for recreation to continue in the Project Area and adjacent lands.

- Mineral Development: Mineral development has historically occurred in the Project Area and presently occurs in the vicinity. There are active mining claims for locatable minerals at the Coyote Mine and surrounding area, so it is reasonably foreseeable that mineral development would occur in the future, although there are no pending actions other than the Proposed Action at this time. Approximately 50 acres of unreclaimed surface disturbance may exist around the Coyote Mine as a result of past exploration and mining activities.

- Wildland fires may occur in or adjacent to the Project Area in the present and the future. Wildland fires have occurred in throughout the region in the past. The extent of wildland fires is unknown until such incident occurs. The size and intensity is unpredictable and is dependent upon many factors including but not limited to climatic conditions, weather, topography, fuel load, humidity, etc. Following a wildland fire an area may experience an increase in nonnative invasive plant species and/or noxious weed species.

- Wildland fire rehabilitation activities may occur after a wildland fire has occurred. It is unknown what actions would be completed within a burned area until the rehabilitation activities are proposed and implemented. Rehabilitation activities may include, but are not limited to, spraying weeds, fencing, seeding, etc.

- At the present there are no known rights-of-ways. Currently, there are no proposed or known foreseeable rights-of-ways.

3.1 Nonnative Invasive Species and Noxious Weeds

Direct and indirect effects study areas are the same as the Project Area. See Figure 2. The Project Area is defined as the existing Coyote Mine open pit and the existing haul road to the point of intersection with the Maggie Creek Road. From the Maggie Creek Road to the location of the jig plant located at Newmont's Maggie Creek Complex site. The cumulative effects study area would be the T Lazy S Allotment, which encompasses the existing Coyote Mine and the

haul route to the jig plant. Nonnative invasive species and noxious weeds may already be present within this allotment since livestock grazing, the Coyote Mine site, the haulage route and other human activities pre-date the Proposed Action and could have provided a vector for introduction.

3.1.1 Affected Environment

A nonnative invasive species present is cheatgrass. Cheatgrass is commonly located in disturbed and burned areas but also exists as a component of the understory in the vegetation surrounding the existing Coyote Mine site and along the roads in the area, including the haulage route. Scotch thistle and hoary cress are also present in the area and are designated as State of Nevada listed noxious weeds by the Natural Resource Conservation Service (NRCS) under the Nevada Administrative Code 555.010. Scotch thistle and hoary cress may exist along the Maggie Creek Road, as they have been documented along some roads within the T Lazy S Allotment that encompass the Project Area. Currently, no noxious weeds exist at the Coyote Mine site and along the old existing haul road.

3.1.2 Effects Analysis

Proposed Action

Soil disturbance, such as blading for road maintenance, and vehicle travel provide an opportunity for nonnative invasive species and noxious weeds to establish. The Proposed Action would create approximately four to five acres of surface disturbance, including the road maintenance, on the existing disturbed area. Increased vehicle travel, road maintenance and other activities under the Proposed Action could increase the potential for entry and spread of nonnative invasive and noxious weed species into and within the disturbed areas for a short duration of approximately 24 weeks. Travel by the public would be temporarily limited in the area due to the installation of a gate(s) to maintain one way traffic controls for the duration of the Project, but would be offset by the increase in traffic related to the Proposed Action. Treatment of noxious weeds by the BLM would be expected to continue at the current level, subject to funding and staff availability. Washing the equipment prior to entering the Project Area would help to prevent the establishment of nonnative invasive and noxious weed species.

The Proposed Action could have an additive cumulative effect when combined with livestock grazing and recreation as possible vectors for increasing the spread of nonnative invasive and noxious weeds over the life of the Project. However, the vehicle and equipment washing protocol would minimize the Proposed Action's contribution to the cumulative effects to negligible.

Mitigation

PCI would be required to wash the equipment either at the jig plant location or vehicle wash bay in Carlin or Elko, Nevada or preferably their headquarters prior to transporting equipment to the Coyote Mine Project Area in order to prevent the spread of noxious weeds and invasive nonnative plant species.

No Action Alternative

Under the No Action Alternative there would be no change to the area as a result of the Proposed Action. Treatment of noxious weeds by the BLM would be expected to continue at the current level, subject to funding and staff availability. Nonnative invasive weed species and noxious weeds that currently exist in the area would continue to exist and spread unless treated. Over time, Scotch thistle, hoary cress and other weeds may move into the area as a result of wildlife, livestock, wind, public use, recreation and the permittee traveling into the area. Other nonnative invasive weed species and noxious weeds may invade the area as a result of vehicle transportation, animals, and wind.

The No Action Alternative would have a negligible cumulative effect when combined with the PPRFFAs; it would not act as an additional vector for introduction other than the natural processes for seed dispersal.

3.2 Soils

Direct, indirect, and cumulative effects study areas are the same as the Project Area. See Figure 2.

3.2.1 Affected Environment

According to the *Soil survey of Tuscarora Mountain Area, Nevada, Parts of Elko, Eureka, and Lander Counties*, the Project Area is located within four primary soil associations, which are the Torro-Jack Creek association, Tusel-Hapgood association, Simon loam, and Stampede-Short Creek association. The Torro-Jack association is located on mountainsides with slopes that range from thirty to seventy-five percent. This unit consists primarily of a very gravelly loam and very gravelly loamy coarse sand. Soils are deep to very deep and well drained to excessively drained. Permeability is moderate to rapid. Available water capacity is low. Runoff is medium to rapid and the hazard of water erosion is moderate to high. The hazard of soil blowing is slight. The Tusel-Hapgood association occurs on the north-facing mountainsides with a thirty to fifty percent slope. This unit includes very gravelly loam, silt loam, and very cobbly loam. Soils are deep to very deep and well drained. Permeability is moderate. Available water capacity is low to moderate. Runoff is rapid, and the hazard of water erosion is high. The hazard of soil blowing is slight. Simon loam is very deep and well-drained soil that is located on the low stream terraces. Permeability of this unit is moderately slow. Available water capacity is high. Runoff is slow, and the hazard of water erosion is slight. The hazard of soil blowing is moderate. The Stampede-Short Creek association is located on dissected low terraces with slopes of four to fifty percent. This unit consists of gravelly loam and gravelly clay loam. Stampede soil is moderately deep to very deep and well drained. Permeability is slow to very slow. Available water capacity is low. Runoff is medium to rapid, and the hazard of water erosion is moderate to high. The hazard of soil blowing is slight to moderate.

3.2.2 Effects Analysis

Proposed Action

The Proposed Action would impact approximately four acres in the existing open pit for the old Coyote Mine and one acre along the existing haul road as a result of road maintenance activities. Effects to soils would primarily occur from road maintenance activities and travel on the haul road. Changes in soil characteristics (chemical and physical) may include loss of soil moisture and organics, erosion, mixing of soil types, compaction and pulverization. Over time, the soil characteristics may change due to erosion, weathering and exposure to the elements such as heat, cold, freezing, rain, and snow. Maintaining vegetation on the down slope berm along the haul road would help to stabilize the soil from erosion and sedimentation into Little Jack Creek.

The Proposed Action would have minimally additive cumulative effect with the PPRFFAs due to the actions being limited to existing disturbance footprints and roads.

No Action Alternative

Under the No Action Alternative the existing soil conditions would continue to occur. The soils in the area are described above in the Soils Affected Environment. Over time, the soil characteristics may change due to erosion and exposure to the elements.

The No Action Alternative would have a negligible cumulative effect when combined with the PPRFFAs; soil characteristics may change due to natural processes such as erosion and exposure to the elements, as well as the PPRFFAs.

3.3 Visual Resource Management

The direct, indirect and cumulative effects study areas are the same as the Project Area. See Figure 2.

3.3.1 Affected Environment

The Project is located in a Class III visual resource management (VRM) area. The Class III VRM objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the landscape. Changes caused by management activities may be evident and begin to attract attention, but these changes should remain subordinate to the existing landscape.

The existing Coyote Mine, exploration roads and haul road create moderate contrasts with the natural landscape in the elements of form and line and weak contrasts in the elements of color and texture.

3.3.2 Effects Analysis

Proposed Action

The Proposed Action would create a minor change to the existing landscape in the elements of form, line, color and texture since the existing disturbance has existed for approximately 34 to 37 years. The linear shapes and lines would continue. The color range of tans to black would continue to exist and be repeated; although temporarily more pronounced as fresh rock surfaces are exposed during the removal of the ore. Overtime the colors would once again fade and blend into the natural landscape. The texture would be rough. Reclamation would round the corners of the form and line to blend with the natural terrain. In time, the visual resource elements of form, line, color and texture would blend into the natural landscape.

Modifications to the landscape anticipated from the Proposed Action are consistent with the BLM management objectives for a Class III VRM area. The landscape had already been modified years ago by the mining of the Coyote Mine, an open pit. As a result of the Proposed Action, there would be minimal change to the open pit of the Coyote Mine and the haul road would remain much the same. Rolling dips with riprap would create a slight change to color and texture along the haul road. Upon completion of the reclamation activities, visual contrasts would be slightly reduced from the present situation. Effects to the visual resources would be minimal for direct and indirect effects.

The Proposed Action would have minimal cumulative effect when combined with the PPRFFAs; overtime the changes in colors and contrasts would fade and once again blend into the landscape.

No Action Alternative

Under the No Action Alternative there would be no change in the visual resources from the present conditions.

The No Action Alternative would have a minimal to negligible cumulative effect when combined with the PPRFFAs; there would be a no change to a slight change to the existing form, line, color and texture over the years. Over time, some lines may become softened slightly due to erosion and some colors may soften due to fading from sun exposure and erosion.

3.4 Surface Water

The direct and indirect effects study area is the Little Jack Creek sub-watershed (Hydrologic Unit Code 12). The cumulative effects study area is the Lower Maggie Creek Watershed (Hydrologic Unit Code 10). Figures illustrating these study areas can be obtained or viewed in the Arturo (Section 3.4 Figures 3.4-1 and 3.4-3), Betze Pit Expansion Project (Section 3.4 Figure 3.4-2) and Genesis (Section 3.4.3 Figure 3-8) Draft Environmental Impact Statement (EIS) documents.

3.4.1 Affected Environment

The existing haul road runs parallel to the Little Jack Creek drainage. Surface water resources within the vicinity of the Project Area include several springs, the lower reaches of Little Jack Creek and a partially ephemeral drainage entering Little Jack Creek. One spring is located about 100 to 200 feet below the toe of the existing waste rock dump, while a second spring is located within the Little Jack Creek channel immediately downstream from the uppermost stream crossing (see Figure 7). Little Jack Creek is generally intermittent in most of the lower reaches (below the canyon mouth) except where perennial water is discharged from the in-channel spring for a distance of approximately 0.7 miles downstream. The Little Jack Creek drainage joins Maggie Creek about 12 miles downstream from the canyon mouth.

3.4.2 Effects Analysis

Proposed Action

No direct effects to water resources would occur. No surface disturbing activities are proposed for areas supporting surface water including springs. Effects, such as sedimentation, may occur at the drainage crossings on Little Jack Creek when these drainages are flowing with water, which could create an adverse effect to aquatic species. However, due to recent drought conditions, it is anticipated Little Jack Creek would be dry or nearly dry at the proposed drainage crossings for the duration of the Project. Although some perennial flow is present within the study area as a result of a spring located within the Little Jack Creek channel, the proposed access route crosses Little Jack Creek immediately above and below the watered reach.

Indirect effects to water resources may occur as a result of increased surface disturbance and temporary removal of upland vegetation along the haul road. During precipitation events, minor amounts of sediment may be transported to drainage ways entering Little Jack Creek. However, measures including: 1) installation of rolling dips in key locations along the existing roadway; 2) placement of rock aprons downslope of rolling dips; and, 3) replacement of a temporary culvert with an armored low-water crossing would reduce potential for erosion and sediment loading during periods of rain and snowmelt. Collectively, these measures have the effect of dissipating energy associated with flowing water. In addition, drainages downslope from the proposed access road including the ephemeral drainage entering Little Jack Creek are well vegetated and are expected to help filter sediment generated from road maintenance activities.

Cumulative effects from the Proposed Action to water resources in the Maggie Creek Basin would be countervailing when combined with the PPRFFAs, since only very minor amounts of sediment would enter the Little Jack Creek drainage due to the road maintenance.

Mitigation

Crossing Little Jack Creek by other than light vehicles would only take place either during low flow or dry channel conditions in order to minimize or prevent sedimentation from occurring.

No Action Alternative

Under the No Action Alternative, the existing road conditions would continue, the ore would not be removed, the existing waste rock dump would not be reclaimed the current conditions would continue.

The existing access road from confluence of the ephemeral drainage with Little Jack Creek to the existing Coyote Mine is highly susceptible to being washed out during precipitation or snowmelt events. The steep part of the road paralleling the ephemeral drainage lacks water bars or other energy dissipating structures which has led to formation of gullies both at locations along the roadway and at the place where the road crosses the ephemeral drainage (hairpin turn). Placement of undersized culverts at the drainage crossing has also led to severe road damage and to extensive erosion during past precipitation events (Elko District BLM files)[1]. Under the No Action Alternative, the road maintenance activities would not be implemented and the existing waste rock dump would not be reclaimed, resulting in reduced site stability, as well as continued and increased potential for erosion and sedimentation during precipitation events.

The No Action Alternative would have an additive cumulative effect when combined with the PPRFFAs; the erosion and sedimentation resulting from precipitation events in the Little Jack Creek sub-watershed would continue to have a negative effect on the Lower Maggie Creek Watershed.

3.5 Wildlife

The direct and indirect effects study area is the Little Jack Creek sub-watershed (Hydrologic Unit Code 12). The cumulative effects study area for all wildlife, except mule deer and elk, is the Lower and Upper Maggie Creek Watersheds (Hydrologic Unit Code 10). The Lower and Upper Maggie Creek Watershed occur within a land area covering approximately 410 square miles (BLM 2012). Mule deer and elk cumulative effects study areas are the Nevada Department of Wildlife (NDOW) Herd Management Area 6, which generally includes the area from the northern end of the Independence Range northeast of the Project Area, south to the Humboldt River and the northern end of the Pinion Range. Figures illustrating the mule deer and elk cumulative effects study areas can be obtained or viewed in the Arturo (Section 3.17 Figures 3.17-1, 3.17-2 and 3.17-4), Betze Pit Expansion Project (Section 3.8 Figures 3.8-4 and 3.8-5) and Genesis (Section 3.4.6 Figure 3-12) Draft Environmental Impact Statement (EIS) documents. Figures illustrating the Maggie Creek Watershed can also be obtained or viewed in these aforementioned EISs.

[1] In April of 1998, the Elko District BLM documented extensive sediment input to both Little Jack Creek and to Maggie Creek as a result of the ephemeral drainage road being washed out. In addition to failure of the undersized culvert on the hairpin turn, numerous gullies developed at both the road crossing and on the downslope portion of the access road. In the absence of a plan to remediate the existing erosion hazards along this road, Little Jack Creek remains at risk of sediment loading during future precipitation or snowmelt events.

3.5.1 Affected Environment

Wildlife species and habitats found in the vicinity of the Project Area are typical of the Great Basin region (Rawlings and Neel 1989). Available water for wildlife consumption is limited in the vicinity of the study areas. Water sources, particularly those that maintain open water and riparian vegetation, support a greater diversity and population density of wildlife species than any other habitat types occurring in the cumulative study area (Rawlings and Neel 1989).

There are approximately 350 species of vertebrate wildlife which occur in northeastern Nevada. There are approximately 100 bird species, 70 mammal species, and several reptile and amphibian species that are found in sagebrush-grassland habitats in northeastern Nevada. Many of these species could inhabit the area surrounding the Project Area on a seasonal or year-long basis. Suitable habitat exists for wildlife species such as coyotes, badgers, mountain lions, rabbits, shrews, rodents, and several reptiles and amphibian species. A variety of resident birds including upland game species, perching birds (passerines), and raptors inhabit the sagebrush-grassland habitats. Upland game birds that may be present include the greater sage-grouse, Hungarian partridge, chucker partridge, and mourning doves.

Big Game Species

Mule deer and elk are the primary big game species within the region. The direct and indirect study area occurs entirely within NDOW's Herd Management Area 6, specifically hunting unit 068. Population numbers for mule deer and elk fluctuate slightly from year-to-year based on habitat conditions. Water availability and amount of quality habitat are the limiting factors in the Management Area 6. The mule deer and elk utilize the area around the proposed Project primarily during the summer but may also use the area during the late spring and early fall months. Water availability, forage quality, cover, and weather patterns typically determine the level of use and movement of big game species. Winter use in the study areas depends on weather and forage availability.

Mule Deer
Population numbers for mule deer in Herd Management Area 6 have shown a general decline over the last 10 years due to a reduction in winter habitat quality, primarily resulting from wildfires. Large scale fires from 1999 to 2012 have caused a severe reduction in available forage (i.e., shrub browse) and an overall increase of noxious weeds and nonnative invasive plant species such as thistle, white-top, and cheatgrass. Below average 2013-2014 snow pack, low spring precipitation and several 2012 fires in the Area 6 Hunt Unit has made for poor range conditions that have negatively impacted wintering mule deer. During spring 2013 helicopter surveys, NDOW classified approximately 4,912 mule deer in Management Area 6 (NDOW 2014). This is the highest fall sample since 1998, but it also showed the second lowest fawn sample on record with a nineteen percent fawn loss.

Mule deer use of the study area is highly variable but typically peaks during fall and spring migrations. The majority of the mule deer in the study area typically spend the summer months in the Tuscarora Mountains and winter in Boulder Creek and the Dunphy Hills area. The study area consists mainly of mule deer limited use habitat, which may be used by mule deer

throughout the year depending on forage conditions. Due to the geographic location of the Project Area between mule deer summer and winter range, mule deer would migrate through the area.

The Coyote Mine and haul road (Project Area) have existed for approximately 34 to 37 years. As illustrated on the mule deer figures in the aforementioned EISs, the Project Area is located within mule deer summer and transition habitat (BLM 2012). The Coyote Mine site is an isolated, small mine existing in the area of Beaver Peak located in the Tuscarora Mountains east-northeast of the Carlin Trend. The Carlin Trend is located approximately four to ten miles to the west-southwest of the Coyote Mine or this Project. Mining operations within the Carlin Trend are located in the vicinity of migration corridors that connect important summer and winter range for big game (mule deer and elk). Over the past ten to twenty years, seasonal big game movement corridors have been restricted due to mining operations in the Carlin Trend portion of the cumulative study area. Historically, up to 34,000 deer migrated through the Carlin Trend area twice annually. From the 1960s to the 1980s, the vegetation in the Carlin Trend was converted to cheatgrass following wildfires. The Area 6 herd has declined to approximately 7,000. With gold prices above $1,000 per ounce, mining activity continues to increase throughout Area 6, but primarily in the Carlin Trend. Due to the expansion of mining developments along the east side of the Tuscarora Mountains in the Carlin Trend, little opportunity remains for unimpeded north/south big game movement. Direct and indirect impacts to mule deer migration corridors remain the highest concern with increased mining and exploration. However, no other mines exist near the Coyote Mine or Project Area, which allows mule deer and elk to move through the area with minimal impedances. Mule deer and elk have lived and moved around the Coyote Mine for the last 34 to 37 years.

Elk

Elk numbers in Management Area 6 have increased over the last several years due to an increase in herbaceous forage as a result of wildfires. NDOW currently estimates the herd at approximately 1200 animals. The study area consists of core summer habitat for elk.

Nongame Species

A diversity of nongame species (e.g., small mammals, passerines, raptors, reptiles, and amphibians) occupies the vicinity of the study area. Habitats found within the vicinity of the study area (e.g., sagebrush shrubland, grassland) support a variety of resident and seasonal nongame species. Nongame mammals include the deer mouse, western harvest mouse, vagrant shrew, Merriam's shrew, Ord's kangaroo rat, sagebrush vole, golden-mantled ground squirrel, least chipmunk, and desert woodrat. Rodent populations provide a large prey base for the area's predators such as coyote (*Canis latrans*).

3.5.2 Effects Analysis

Proposed Action

The Proposed Action would result in a temporary loss of less than one acre and a possibly a long term net habitat increase of approximately four acres. Reclamation following removal of ore

from the existing open pit may create some habitat by allowing some herbaceous plant species to grow that would be available for wildlife forage on the current unreclaimed pit floor of the mine site.

Effects associated with the ore removal from the open pit are expected to be similar for all wildlife species encountered in the Project Area. Any disturbance to general wildlife and game species would likely be limited to temporary auditory or visual irritation of individuals in or near the Project Area from people and equipment. Individuals foraging in the vicinity of the Project Area during the removal of ore from the existing open pit would likely leave the immediate area resulting in a temporary spatial redistribution of individuals or habitat use patterns during the Project; this would not be a long-term effect since there is undisturbed and suitable habitat that exists around the Project Area outside of the existing open pit. If displaced wildlife move into habitat already at carrying capacity, there could be a higher mortality rate among the displaced individuals and an impact to the resident population. This would cause a reduction of viable young at least for the next breeding season in the area. The disturbance due to Project-related activities would be short-term. No long-term negative effects are likely to occur since reclamation and reestablishment of vegetation efforts would take place immediately after Project completion. Long-term positive effects would result from the pit floor reclamation if vegetation establishes. The quality, quantity, and distribution of suitable wildlife habitat are not expected to be substantially altered by this Project's implementation because the Project would occur on existing disturbance at the Coyote Mine that has been in existence for 34 to 37 years. Changes to the Project Area are limited and the biggest change would be the removal of approximately 60,000 tons of ore that is currently void of vegetation in the open pit. Removal of the ore may expose fresh rock surfaces with little to no soil left for seeding plant species during reclamation. The dimensions of the existing open pit would not change. A minor increase in traffic would occur; however, the likelihood of wildlife-vehicle collisions would be minimized by the slow speed limitations dictated by the topography and steepness of the area. The majority of the time the Project would be occurring is outside of the mule deer and elk migration seasons. The peak migration period for mule deer and elk is usually around November 15 depending on the weather conditions. If PCI completes the Project prior to November 15, the likely hood of the Project interfering with or impacting the migration season is reduced.

The change to the Project Area created by the removal of the ore and the maintenance on the existing road would be minimal and hardly noticeable since the Coyote Mine has existed for 34 to 37 years. Once the Project is complete the minimal sections of vegetation that were removed along the road would reestablish.

The Proposed Action would have a countervailing cumulative effect when combined with the PPRFFAs; the successful reclamation of the pit floor would benefit wildlife in the long term. If the reclamation of the pit floor fails then the site would be similar to the pre-Proposed Action conditions, which would result in minimal cumulative effects of an additional five acres of disturbance.

No Action Alternative

Under the No Action Alternative, wildlife species would continue to utilize the vegetation and habitat that exists surrounding the existing Coyote Mine open pit as they have done over the last 34 to 37 years. The Coyote Mine open pit would continue to be void of vegetation until such time, if ever, vegetation grows on the pit floor and ore deposit. The existing haul road would continue to exist with its limited amount of vegetation growth along and in the roadbed and it would not be subjected to the less than one acre of increased habitat fragmentation along the existing haul road. Wildlife species would continue to be unable to utilize the approximately four acres of barren pit floor for forage at the mine site.

The No Action Alternative would have a minimal cumulative effect when combined with the PPRFFAs; the Project Area would continue to not provide suitable wildlife habitat.

3.6 Special Status Species (Threatened, Endangered, Candidate and Sensitive)

The Project Area is illustrated on Figure 2. The direct and indirect effects study areas for the special status species are the Little Jack Creek sub-watershed (Hydrologic Unit Code 12). The cumulative effects study area for the special status species is the Lower and Upper Maggie Creek Watersheds (Hydrologic Unit Code 10), except for the greater sage-grouse. Greater sage-grouse cumulative effects study area is illustrated in the figures in Arturo (Section 3.18 Figures 3.18-1, 3.18-2, and 3.18-3), Betze Pit Expansion Project (Section 3.8 Figure 3.8-7), and Genesis (Section 3.4.6 Figure 3-14) Draft Environmental Impact Statement (EIS) documents. Figures illustrating the greater sage-grouse cumulative effects study area and the Maggie Creek Watershed can be obtained or viewed in these aforementioned EISs.

3.6.1 Affected Environment

Special status species are those species for which state or federal agencies afford an additional level of protection by law, regulation, or policy. Included in this category are federally listed species that are protected under the Endangered Species Act (ESA) and species designated as sensitive by the BLM. In addition, there is a Nevada State protected animal list (Nevada Administrative Code 501.100-503.104) that the BLM has incorporated, in part, into its sensitive species list.

In accordance with the ESA, as amended, the lead agency (BLM) in coordination with the USFWS must ensure that any action that they authorize, fund, or carry out would not adversely affect a federally listed threatened or endangered species. In addition, as stated in Special Status Species Management Policy 6840 (6840 Policy) (Rel. 6-125), it also is BLM policy "to conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA provisions are no longer needed for these species, and to initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA." The following discussion summarizes known data for the special status species identified for the proposed Project by the applicable agencies.

No federally-listed plant species are known to occur in the Project Area. No federally-listed endangered wildlife species occur within the Project Area. One federal threatened species, the Lahontan Cutthroat Trout (LCT) and two federal candidate species, the Columbia spotted frog and the greater sage-grouse (Centrocercus urophasianu), have the potential to occur in the Project Area.

A number of special status bird species have the possibility to be incidentally within the Project Area; although the Project Area does not provide suitable habitat for nesting. These individuals may be temporarily in the area foraging or passing through during migration. These species would include the bald eagle, Swainson's hawk, and the long-eared owl. Nesting and foraging habitat occurs within the Project Area for year-round wildlife residents of Nevada, including bats and migratory bird species.

Aquatic Special Status Species

Little Jack Creek supports Lahontan Cutthroat Trout (LCT), a federally listed threatened species under the Endangered Species Act (ESA) and the Columbia spotted frog, a federal candidate species for listing under the ESA. The LCT in Little Jack Creek is part of a larger population (metapopulation) in the Maggie Creek Basin comprised of several tributary streams and the mainstem of Maggie Creek. The spotted frog population in the Little Jack Creek drainage is considered part of the Great Basin Distinct Population Segment and is considered geographically distinct from the remainder of the species

Activities which affect water quality have the potential to affect LCT and spotted frogs. Sediment input from roads can act or lead to adverse channel adjustments and loss of associated riparian habitat, increased in water temperatures, clogging of gills and decreases in substrate quality for spawning and invertebrate production.

Terrestrial Special Status Species

Birds

Greater sage-grouse are a federally listed candidate species found throughout Nevada in sagebrush-dominated habitats. Sagebrush is a key component of greater sage-grouse habitat on a year-long basis (USFWS 2006). Sagebrush provides forage, nesting, security, and thermal cover for this species. Moist areas that provide succulent herbaceous vegetation during the summer months are used extensively as brood rearing habitat. Open, often elevated areas within sagebrush habitats usually serve as breeding areas (strutting grounds or lek sites) (USFWS 2006). Greater sage-grouse males begin displaying on leks in March, and hens typically begin nesting in April and May. During winter, greater sage-grouse often occupy wind exposed areas where sagebrush is available (e.g., drainages, southern or western slopes, or exposed ridges). Greater sage-grouse habitat distribution data has been kept historically by NDOW. According to NDOW habitat distribution maps, the closest greater sage-grouse lek area is five miles away in the Maggie Creek drainage area. Sage-grouse broods have been observed using meadow areas on the lower reaches of Little Jack Creek in July and August. The Project Area is situated in winter habitat. In addition to the NDOW designated habitat, the BLM has recently issued

additional guidance on greater sage-grouse management. According to BLM Instruction Memorandum 2012-043, two habitat categories have been developed by the BLM and NDOW to help apply management guidelines designed to protect greater sage-grouse habitat. These habitat types are referred to as Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH). PPH comprises areas that have been identified as having the highest conservation value to maintaining sustainable greater sage-grouse populations. PPH comprises essential/irreplaceable habitat and important habitat. PPH includes breeding, late-brood rearing, and winter concentration areas. PGH comprises habitat of moderate importance, low value habitat, or transitional habitat outside of priority habitat. Both PPH and PGH occur in the vicinity of the Project Area. Due to the presence of suitable habitats, this species may occur occasionally in the area.

Golden Eagle

The golden eagle is a yearlong resident and is considered to be a common breeder throughout Nevada; however, eagle densities and nesting activity are greatest in the northern third of Nevada (Floyd et al. 2007; Herron et al. 1985). Nesting golden eagles prefer suitable cliffs that overlook sagebrush flats, pinion-juniper forests, salt desert shrub, or other habitat capable of supporting a suitable prey base. The highest densities of nesting eagles typically are found along river systems where cliffs border the entire length of the river, and lower densities are found in pinion-juniper habitat and salt desert shrub communities. Golden eagles begin nesting in March and young fledge by July. Wintering golden eagles tend to congregate in broad valleys interspersed with agricultural croplands or sagebrush and desert shrub communities (Herron et al. 1985; Johnsgard 1990). No nest sites have been observed within the Project Area. However, this species has been observed in the cumulative effects study area. In 2013, an eagle survey was conducted in the vicinity of the Project. An inactive eagle nest was located in the vicinity of the Project. Such habitat is lacking in the vicinity of the Project Area.

Loggerhead Shrike

The loggerhead shrike is a common resident throughout Nevada. This species is found in open grasslands along valley floors and the foothills of the Great Basin. In Nevada, it is commonly found in scrub habitat types such as sagebrush and greasewood. Loggerhead shrikes prefer shrubs or small trees for nesting, but nesting also can occur in pinion-juniper woodlands. The closest pinion-juniper woodlands are located several (greater than 50) miles south-southeast of the Project. This species can be found perching on wire, fences, or poles (Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006). The breeding season for this species is April 15 to July 15.

Vesper Sparrow

The vesper sparrow is a summer resident that occurs in various open shrub habitats from high elevation valleys to higher mountain slopes and basins. This species occurs from approximately 5,500 feet in elevation in the foothills of northern Nevada to approximately 9,000 feet in elevation in surrounding mountain ranges. Open areas with a scattered canopy of big sagebrush and a minimum ground cover of 20 percent grasses, forbs, and young shrubs appear to be the preferred nesting habitat for this species. Nests are typically placed on the ground under or near shrubs (Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006). The breeding season for this species is April 15 to July 15.

Mammals

Special Status Bat Species
Federal and state sensitive bat species that have been identified as potentially occupying appropriate habitat types within or near the Project Area include the Townsend's big-eared bat (Corynorhinus townsendii), big brown bat (*Eptesicus fuscus*), California myotis, small-footed myotis, long-eared myotis (*Myotis volans*), little brown myotis (*Myotis lucifugus*), long-legged myotis, western pipistrelle bat (*Parastrellus hesperus*), and Brazilian free-tailed bat (*Tadarida brasiliensis*). Roosting habitat within the vicinity of the Project includes aspen stands and rock outcrops. Higher elevation forest habitats (small aspen groves) and cliffs are present in the Tuscarora Mountains and may provide potential roosting habitat for area bats.

Foraging and day roosting habitat is available in the vicinity of the Project Area for the Townsend's big-eared bat, big brown bat, long-legged myotis, little brown bat, western pipistrelle bat, Brazilian free-tailed bat, and western small-footed myotis (*Myotis ciliolabrum*). No hibernacula or maternity roost habitat are available in the Project Area.

3.6.2 Effects Analysis

Proposed Action

Potential direct, indirect and cumulative effects to LCT and Columbia spotted frogs are considered negligible. Riparian habitats would not be impacted as a result of the Proposed Action, while measures to reduce potential for erosion along the proposed access route (see discussion under Surface Water) would effectively prevent sediment from entering Little Jack Creek. The installation of rolling dips with associated riprap aprons along the haul road could create a positive effect or benefit for aquatic species in Little Jack Creek.

Maintenance of the access road could cause special status wildlife species to avoid the area or change their pattern of movement due to the presence of humans, equipment and activities that create noise and dust. Trucks traveling the haul road during the summer months may temporarily affect the greater sage-grouse broods utilizing the meadow areas along the lower reaches of Little Jack Creek by causing them to flush when the trucks drive by. The Proposed Action could potentially impact the foraging and day roosting activities of the BLM sensitive bat species as disturbance of the access road is along a drainage and if widening activities occurs near occupied rock outcrops. Indirect effects to these species could result from human activity and noise. However, the bats may forage and roost in similar habitat located adjacent to the Project Area during Project-related activities.

The Proposed Action may result in negligible effects to approximately four acres of foraging, nesting, and roosting habitat for BLM special status species over the one year life of the Project. A small increase in habitat fragmentation would occur with the removal of vegetation along the access road, but would be offset by successful reclamation of the pit floor to reestablish vegetation values. Over time and years of adequate precipitation, vegetation would reestablish along both edges of the road, which would provide a small increase in habitat for some animal or bird species and reduce the effects of habitat fragmentation.

Special status species, nesting, roosting, and breeding in the vicinity of the Project Area could be positively affected by successful reclamation of the pit floor with a site specific seed mixture that would reestablish habitat that has been devoid of most vegetation for up to 37 years. As the amount of reclamation should be greater than the less than one acre fragmentation addition to the existing access road, effects to greater sage-grouse should be positive as result of the Project.

Positive effects to BLM special status species habitat would be increased through reclamation and the Proposed Action would result in a permanent long-term net gain of potential habitat if seeding the pit floor is successful. If potential habitat were disturbed by the Project, effects on local and regional populations would be minimal, temporary, and not expected to contribute to any detectable loss of viability for the individuals, local populations, or regional populations of these species. Therefore, effects to BLM special status species from the Proposed Action are expected to be negligible. Indirect effects to special status species would be negative in the short term.

If seeding the pit floor is unsuccessful due to the nature of the material being solid rock once the ore is removed, the Project Area may continue to provide unsuitable habitat for nesting for special status wildlife species. If the reclamation of the pit floor fails, a minimal but negative effect would continue to exist at the Project for special status wildlife species as the conditions of the site return to similar pre-Proposed Action conditions.

The Proposed Action would have countervailing cumulative effects when combined with the PPRFFAs provided the reclamation of the pit floor is successful. Successful reclamation would create a long-term benefit for special status wildlife species by providing habitat for foraging and nesting. If the reclamation of the pit floor fails, the cumulative effects when combined with the PPRFFAs is minimal but negative and approximately four acres of additional disturbance would continue to exist that would be void of suitable wildlife habitat in either the short or long- term.

No Action Alternative

Indirect and cumulative effects to LCT and Columbia spotted frogs would be negative. The road paralleling the ephemeral drainage is at risk for further degradation during precipitation or snowmelt events (see discussion under Surface Water). Under the no action alternative, LCT and Columbia spotted frogs would be subject to high sediment loads should the road continue to erode during storm events. High sediment contributions to the Little Jack Creek drainage would also add a negative cumulative impact to other land uses in the Maggie Creek Basin affecting fisheries and frog habitat including livestock grazing, agriculture, recreation and mining.

Under the No Action Alternative, special status species would continue to utilize the limited amount of vegetation and not be subjected to the less than one acre of increased habitat fragmentation along the existing Coyote Mine haul road. Special status species would continue to be unable to utilize the four acres of barren pit floor at the mine site for foraging and nesting.

The No Action Alternative would have a minimal cumulative effect when combined with the PPRFFAs; the Project Area would continue to not provide suitable wildlife habitat.

3.7 Migratory Birds

The direct and indirect effects study area is the Little Jack Creek sub-watershed (Hydrologic Unit Code 12). The cumulative effects study area is the Lower and Upper Maggie Creek Watersheds (Hydrologic Unit Code 10). Figures illustrating these study areas can be obtained or viewed in the Arturo, Betze Pit Expansion Project and Genesis Draft Environmental Impact Statement (EIS) documents.

3.7.1 Affected Environment

Migratory birds are those listed in 50 CFR 10.13 including all native birds commonly found in the United States, with the exception of native resident game birds. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) (16 USC 701-718h), which prohibits the taking of migratory birds, their parts, nests, eggs, and nestlings. Federal agencies are directed to protect migratory birds by integrating bird conservation principles, measures and practices under the executive order 13186, signed January 10, 2001.

Additional direction comes from the Memorandum of Understanding (MOU) between the BLM and the USFWS, signed April 12, 2010. The MOU develops management objectives and recommendations that avoid or minimize potential impacts identified concerning high priority migratory bird species. The purpose of the MOU is to strengthen migratory bird conservation through enhanced collaboration between the BLM and USFWS, in coordination with state, tribal, and local governments.

In addition, the BLM Nevada State Office prepared Migratory Bird Best Management Practices (BMPs) for the Sagebrush Biome in order to assist BLM field offices in the consideration of migratory birds in land management activities (BLM 2003). In Nevada, all birds protected under the MBTA also are state protected (NAC 503.050). Many of the sensitive migratory bird species found in Nevada also are identified in the Nevada Partners in Flight (PIF) Bird Conservation Plan (Neel 1999). This plan, along with the Birds of Conservation Concern (BCC) Plan (USFWS 2008), prioritizes migratory bird species for management actions according to habitat types.

Proposed Action

A wide variety of migratory birds utilize the Project Area. They are associated with a variety of habitats, and some species are year-round residents. A compilation of migratory bird species that could utilize the Project Area and the habitats they require are shown in Table 3.1 below.

Table 3.1

Common Name	**Scientific Name**	**Status**[1]
American kestrel	*Falco sparverius*	
American robin	*Turdus migratorius*	
Bald eagle	*Haliaeetus leucocephalus*	BCC
Barn swallow	*Hirundo rustica*	
Black-billed magpie	*Pica pica*	

Common Name	**Scientific Name**	**Status**[1]
Brewer's blackbird	*Euphagus cyanocephalus*	
Brewer's sparrow	*Spizella breweri*	BCC
Brown-headed cowbird	*Molothrus ater*	
Bullock's oriole	*Icterus bullockii*	
Burrowing owl	*Athene cunicularia*	BLM, PIF
Canada goose	*Branta canadensis*	
Chipping sparrow	*Spizella passerina*	
Chukar	*Alectoris chukar*	
Cinnamon teal	*Anas cyanoptera*	
Cliff swallow	*Hirundo pyrrhonota*	
Common raven	*Corvus corax*	
Common snipe	*Gallinago gallinago*	
Ferruginous hawk	*Buteo regalis*	BLM, PIF
Gadwall	*Anas strepera*	
Golden eagle	*Aquila chrysaetos*	BLM, BCC
Gray partridge	*Perdix perdix*	
Greater sage-grouse	*Centrocercus urophasianus*	BLM, BCC, PIF
Horned lark	*Eremophila alpestris*	
Juniper titmouse	*Baeolophus ridgwayi*	BLM, PIF
Killdeer	*Charadrius vociferus*	
Lark sparrow	*Chondestes grammacus*	
Lewis's woodpecker	*Melanerpes lewis*	BLM, BCC, PIF
Loggerhead shrike	*Lanius ludovicianus*	BLM, BCC, PIF
Long-billed curlew	*Numenius americanus*	BCC, PIF
Mallard	*Anas platyrhynchos*	
Mourning dove	*Zenaida macroura*	
Northern flicker	*Colaptes auratus*	
Northern rough-winged swallow	*Stelgidopteryx serripennis*	
Pinyon jay	*Gymnorhinus cyanocephalus*	BLM, BCC, PIF
Prairie falcon	*Falco mexicanus*	BLM, PIF
Red-tailed hawk	*Buteo jamaicensis*	
Red-winged blackbird	*Agelaius phoeniceus*	
Ring-necked duck	*Aythya collaris*	
Rough-legged hawk	*Buteo lagopus*	
Sage sparrow	*Amphispiza belli*	BCC, PIF
Sage thrasher	*Oreoscoptes montanus*	BCC, PIF
Say's phoebe	*Sayornis saya*	
Short-eared owl	*Asio flammeus*	BLM, PIF
Swainson's hawk	*Buteo swainsoni*	BLM, PIF
Turkey vulture	*Cathartes aura*	
Vesper sparrow	*Pooecetes gramineus*	BLM, PIF
Western kingbird	*Tyrannus verticalis*	
Western meadowlark	*Sturnella magna*	
Western wood-peewee	*Contopus sordidulus*	

[1] BLM = BLM Sensitive; BCC = USFWS Birds of Conservation Concern; PIF = Nevada Partners in Flight Priority Bird Species.

Many of these species are associated with a variety of habitat types and some occur within the Project vicinity year-round (e.g., red-tailed hawk, chukar, gray partridge). However, due to the higher level of plant diversity and structure, more abundant potential nest sites, and greater food base, the riparian zone along the drainages supports the highest diversity of bird species within the area.

Raptor species that potentially occur as residents or migrants within the area include eagles (bald and golden eagles), hawks (e.g., red-tailed hawk, Swainson's hawk, ferruginous hawk), falcons (e.g., prairie falcon, American kestrel), owls (e.g., short-eared owl and burrowing owl), northern harrier, and turkey vulture (Floyd et al. 2007; Herron et al. 1985). A suspected raptor migration route occurs along the Tuscarora Mountains and Sheep Creek Range (Herron et al. 1985). As a result, raptor use within the area may increase during spring and fall. The Project Area is located in the Tuscarora Mountains, but the Sheep Creek Range is located approximately seven to ten miles west to northwest of the Project Area.

Details on sensitive bird species such as bald eagle, golden eagle, Swainson's hawk, long-eared owl, loggerhead shrike and vesper sparrow are discussed further in Section 3.6 Special Status Species (Threatened, Endangered, Candidate and Sensitive).

3.7.2 Effects Analysis

Proposed Action

The Proposed Action would affect only a small portion of potential migratory bird habitat in the reestablished vegetation along the access road due to maintenance and widening activities. No migratory bird habitat is present in the Coyote Mine open pit. The access road leading to the mine site would have some re-disturbance and removal of vegetation along some sections. This vegetation has established from previous disturbance that occurred during the initial mine activity in the 1970's and 1980's. The more viable vegetation that has reestablished on the downhill side of the road would be left intact with only uphill vegetation being removed for road widening activities. A reclamation program would reestablish vegetation on the disturbed portions of the access road.

Implementation of the standard operating procedures for migratory bird surveys would ensure that prior to Project-related surface disturbance, nesting surveys for migratory birds (including raptors) would be conducted and any identified nests would be avoided. A temporary loss of less than one acre of foraging habitat over the 24 weeks of the Project is not expected to reduce the forage potential of any species.

Any potential effect would also only occur if such activities occurred within the breeding/nesting season (March 15 through July 31). Disturbance outside these time frames would not result in migratory bird detrimental effects to eggs, nests of fledglings. Project activities could potentially result in the destruction of active nests, disturb the breeding behavior of migratory bird species, or increase the potential from vehicle mortality. Implementation of the standard operating

procedure to survey for migratory birds and nests could reduce potential effects by avoiding nest sites and reducing the likely hood of destroying nests and killing any birds.

The Proposed Action would have minimal cumulative effect when combined with the PPRFFAs; there would be no change to a slight change to the open pit floor. Once the ore is removed the pit floor may be solid rock and have little soil for plant growth. Waste rock material left in the pit may also contain little soil which would limit plant growth on the pit floor. The Coyote Mine site may be similar in nature post-Proposed Action as it is pre-Proposed Action. If the reclamation seeding is successful it would be beneficial in providing nesting habitat for migratory birds long-term. If the reclamation seeding of the pit floor fails, the open pit would continue to lack suitable habitat for migratory birds.

Mitigation

The standard operating procedure of conducting a migratory bird survey would be implemented during the avian breeding season of March 15 through July 31. It reads as follows:

Prior to surface disturbance being conducted during the avian breeding season (March 15 through July 31), PCI would provide a biologist to conduct migratory bird nest surveys of active road disturbance to verify no nesting birds would be affected. During the period from March 15 to May 30, all ground-disturbing activities would be completed within 14 days from the date on which the nest survey was performed. If activities begin or last more than 14 days from the date of the most recent nest survey, another nest survey would be performed to ensure that no nests were established or disturbed and that no take of migratory birds occurs. A single migratory bird nest survey can be performed without the 14-day time restriction for Project activities occurring between May 30 and July 31 as a substantial portion of migratory bird species would have completed nesting activities by then. If nests are located, or if other evidence of nesting (i.e. mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer (the size depending on habitat requirements of the species) would be delineated in coordination the BLM and the buffer area avoided to prevent destruction or disturbance to birds or nests until they are no longer active.

The BLM seed mixture for the seeding of the pit floor and haul road disturbance would include plant species such as: blue flax (1/4 lb/acre), western yarrow (1/10 lb/acre), bluebunch wheatgrass (2 lbs/acre), crested wheatgrass (not to exceed 2 lbs/acre), small burnett (1/4 lb/acre), and antelope bitterbrush (2 lbs/acre). The pit floor would be seeded in the fall following completion of the Project. Application rate is 6-7 pounds per acre pure live seed. When broadcast seeding, the application rate should be applied at a one and a half times or doubled. Adjustments to the seed mixture and application rate would be made in consultation with the BLM due to seed availability and site conditions following the removal of the ore. The Nevada Guidelines for Successful Revegetation for the Nevada Division of Environmental Protection, the Bureau of Land Management and the USDA forest Service (IM-NV-1999-013) would be utilized for guidance in determining criteria for successful revegetation.

No Action Alternative

Indirect effects to migratory birds would be negative and cumulative effects would be positive with successful reclamation of the pit floor. Under the No Action Alternative, migratory birds would continue to utilize this limited amount of vegetation that has established along the existing haul road and be unable to utilize the approximately four acres of barren pit floor at the mine site.

The No Action Alternative would have minimal cumulative effect when combined with the PPRFFAs; as there would be no change to a slight change in the Coyote Mine site. The pit floor would continue to provide no habitat to minimal amounts of unsuitable habitat for migratory birds.

3.3 RESIDUAL EFFECTS

Residual effects resulting from the Proposed Action after implementing the reclamation measures would be the loss of the mineralized material, which is approximately 60,000 tons of barite.

3.4 MONITORING

A BLM representative would conduct regular field inspections throughout the operation and reclamation activities associated with the Proposed Action. Field compliance inspections would be documented in the Project file at the BLM Elko District Office.

4.0 CONSULTATION AND COORDINATION

4.1 List of Preparers

<u>BLM Specialist</u>

Janice Stadelman	Project Lead/Socio-economics
Beth Bigelow	Cultural Resources/Native American Religious Concerns/ Environmental Justice
John Daniel	Air Quality/Soil/Water Resources/Climate Change
Nycole Burton	Wildlife/Special Status Species/Threatened and Endangered Species/Migratory Birds
Carol Evans	Special Status Aquatic Species/Water Resources
Jerrie Bertola	Livestock Grazing/Vegetation
Zack Pratt	Wilderness/Recreation/Lands with Wilderness Characteristics/ Visual Resource Management
Elisabeth Puentes	Lands/Realty/Access
Terri Barton	Nonnative Invasive Weeds/Noxious Weeds
Terri Dobis	NEPA Coordinator

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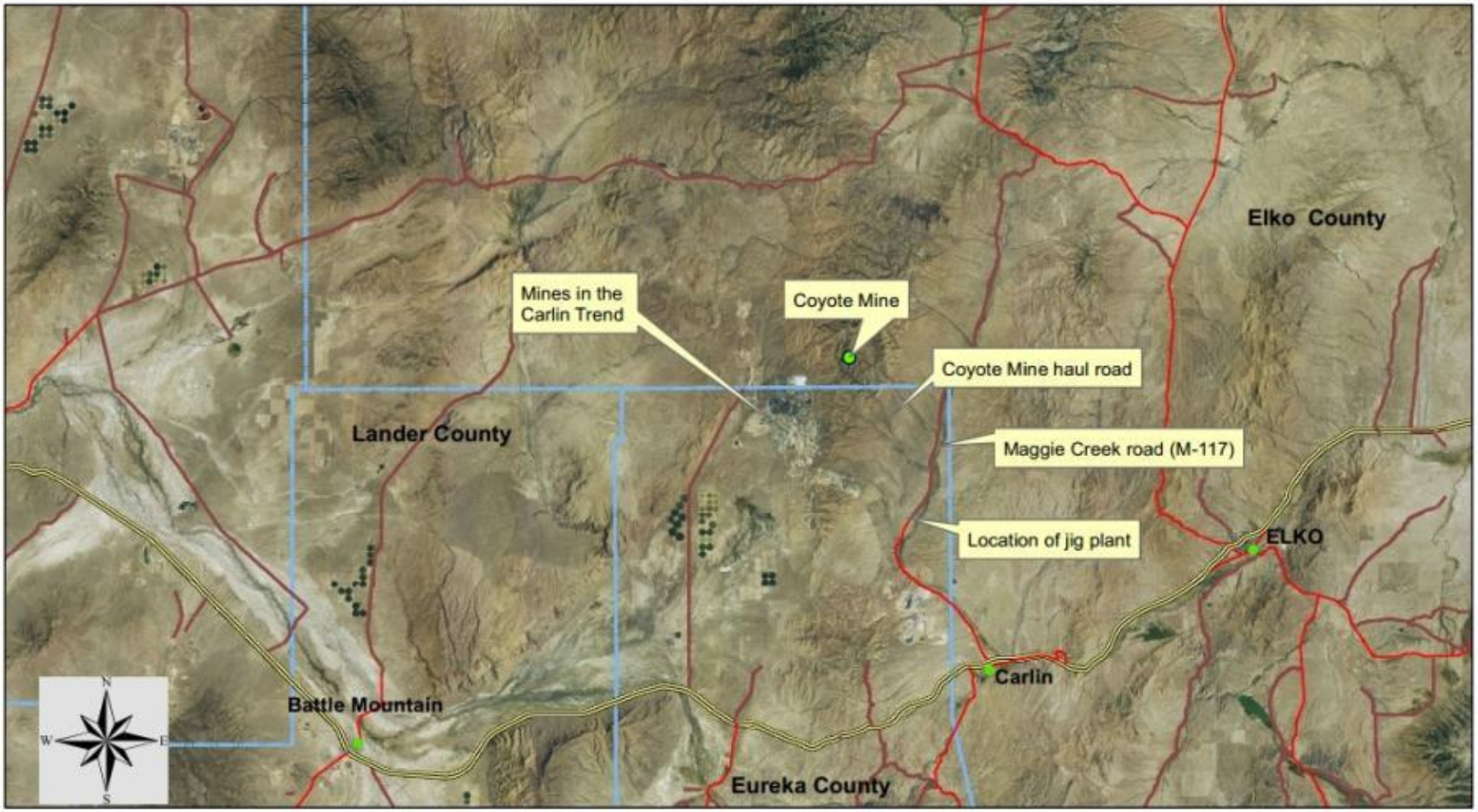
FIGURES

COYOTE STOCKPILE PROJECT SUMMER CAMPAIGN
Figure 1 -- Location



United States
Department of the Interior
Bureau of Land Management
Elko District Office

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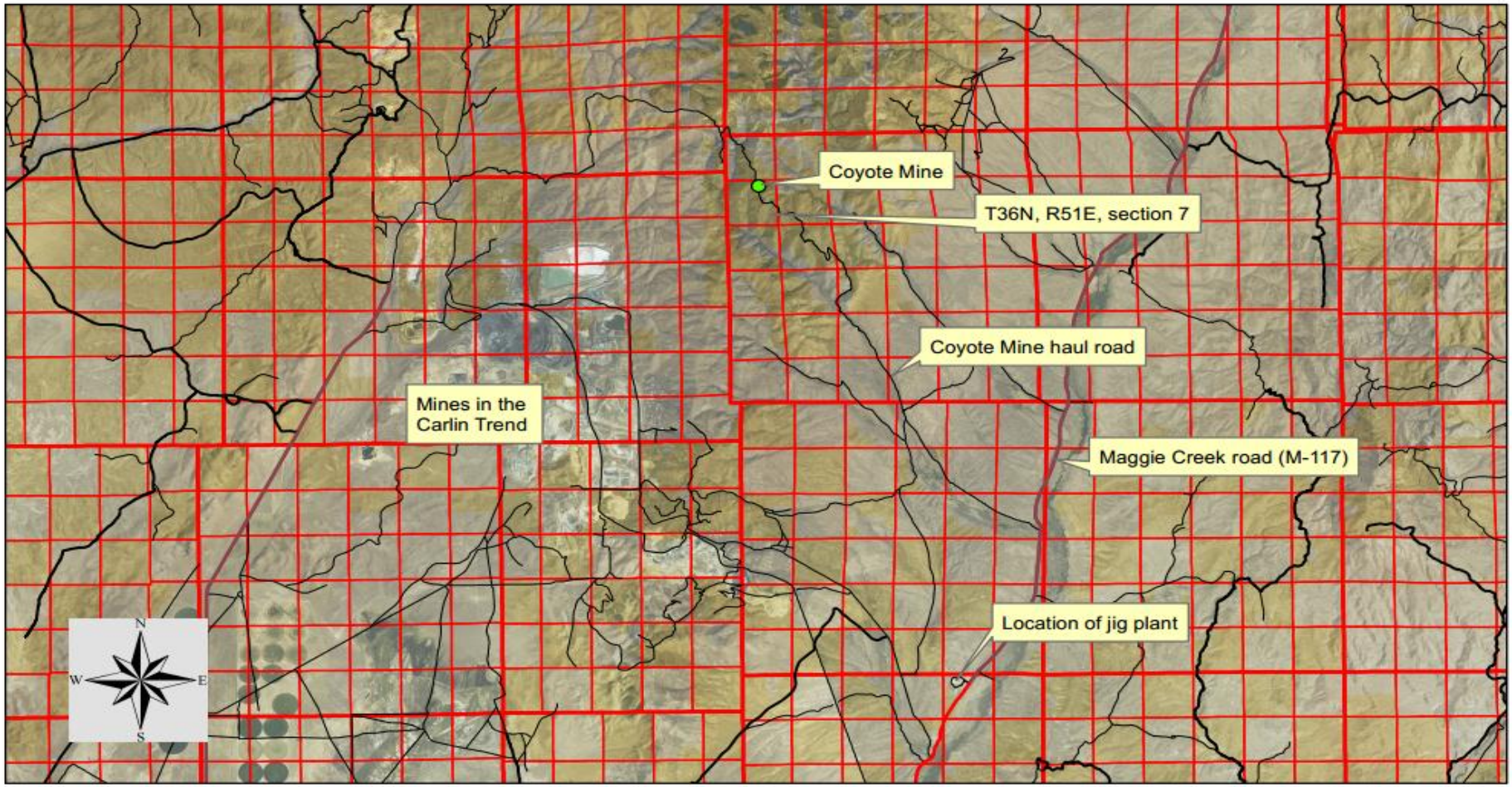
Data is published in:
NAD 83, UTM
Zone 11, Meters
3/12/2015

No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

Figure 1: Location

COYOTE STOCKPILE PROJECT SUMMER CAMPAIGN

Figure 2: Project Area (Coyote Mine - haul road- Maggie Creek Road - jig plant)



United States
Department of the Interior
Bureau of Land Management
Elko District Office

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Data is published in:
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Zone 11, Meters
3/12/2015

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Figure 2: Project Area

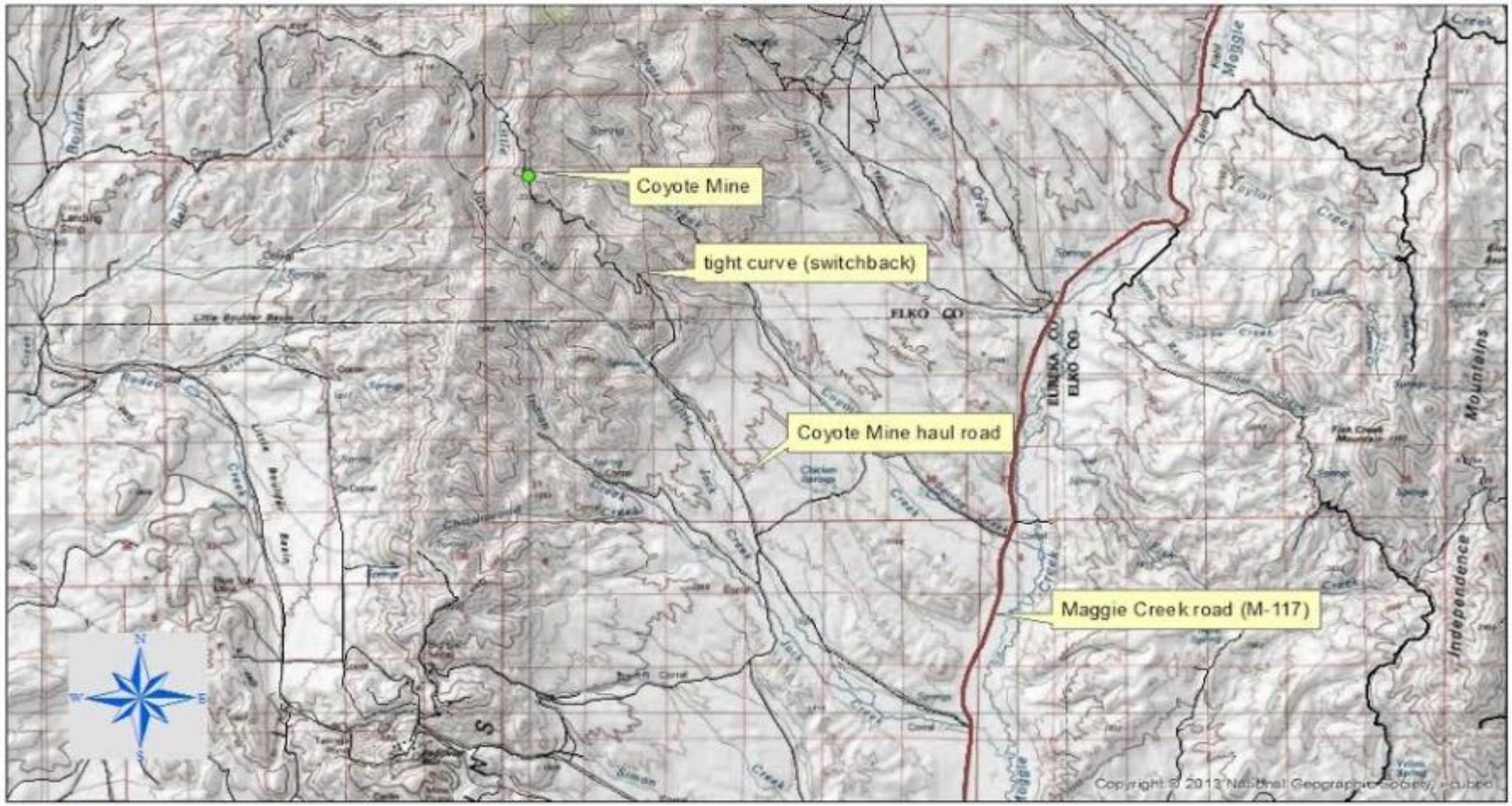
COYOTE STOCKPILE PROJECT SUMMER CAMPAIGN

Figure 3: Coyote Mine (existing disturbance) [Nevada NAIP 2013]

Figure 3: Existing Disturbance (As Seen on Nevada NAIP 2013 Aerial Map)

COYOTE STOCKPILE PROJECT SUMMER CAMPAIGN

Figure 4: Coyote Mine - haul road- Maggie Creek Road



United States
Department of the Interior
Bureau of Land Management
Elko District Office

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3/12/2015

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Figure 4: Haul Road (Maggie Creek Road)

Figure 5: Typical Design for Rolling Dip and Apron

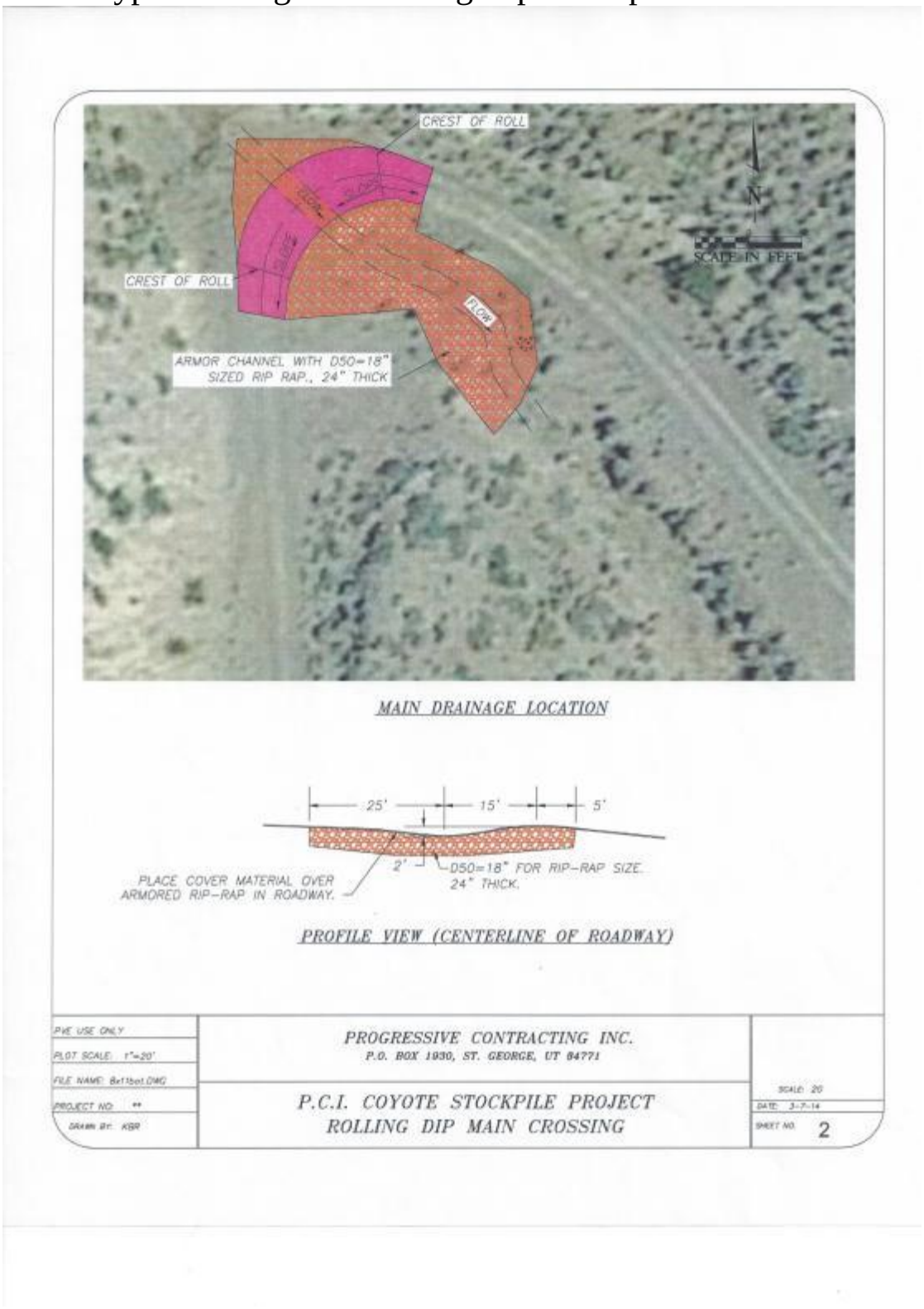

Figure 6: Claims and Access Rd

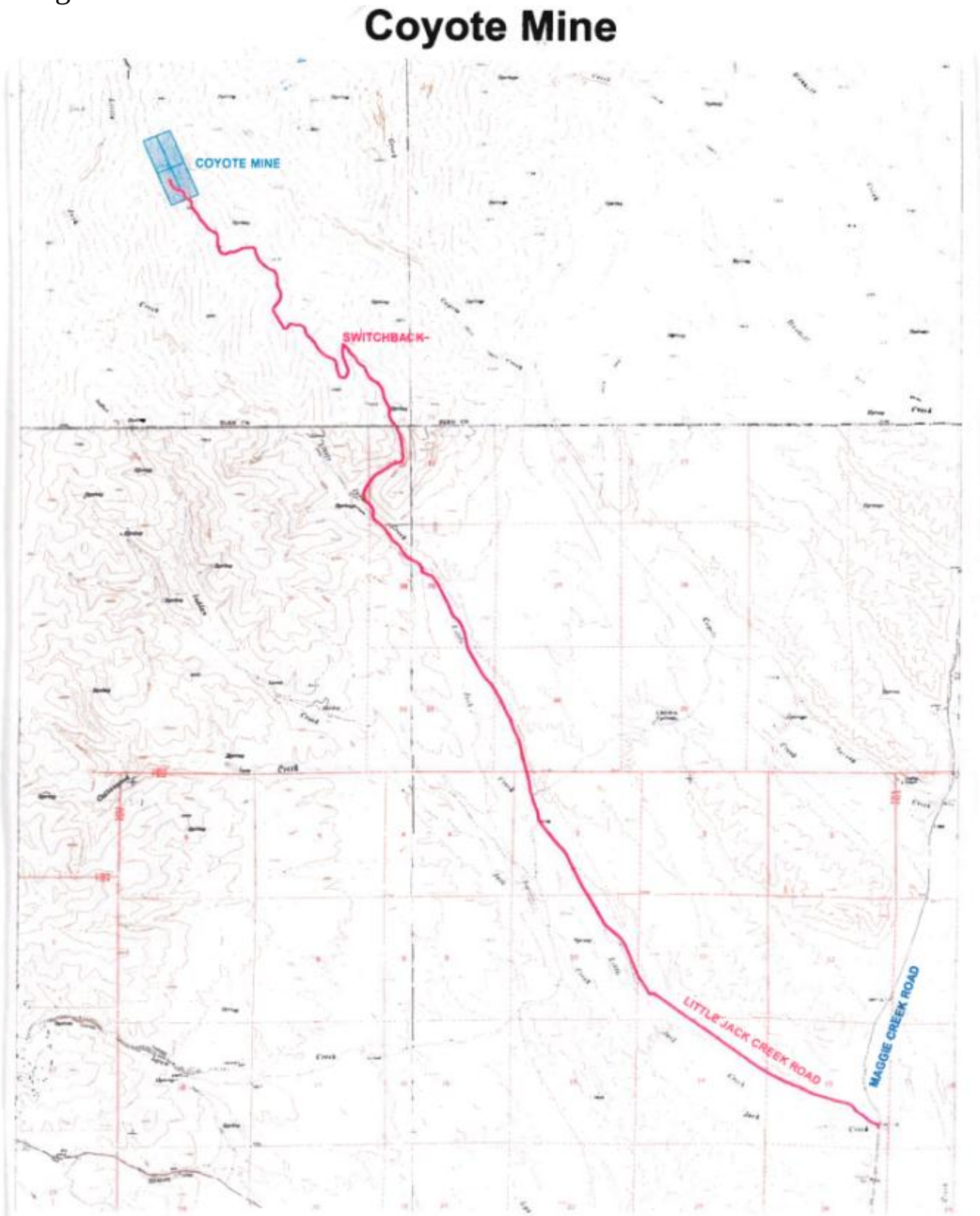

Figure 6: Claims & Access Road, 1"=1 mile

COYOTE STOCKPILE PROJECT SUMMER CAMPAIGN

Figure 7: Little Jack Creek and haul road crossing [Nevada NAIP 2013]

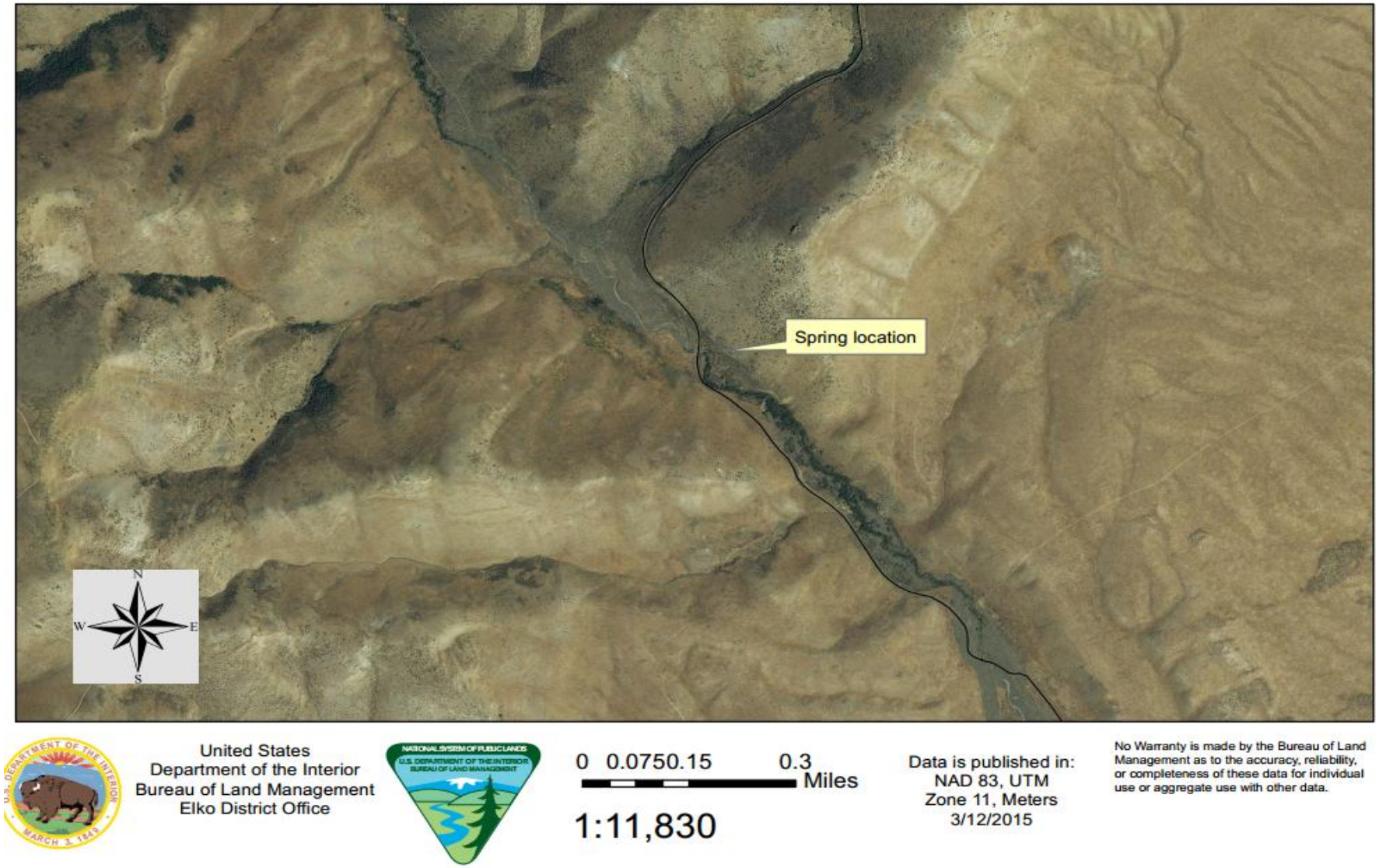

Figure 7: Little Jack Creek And Haul Road Crossing